

List of Current Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claims 1 - 13 (Cancelled).

14. (New) An apparatus for determining and/or monitoring at least one physical or chemical, process variable of a medium, having:

at least one oscillatable unit which produces, and/or receives, mechanical oscillations;

at least one tuning unit whose stiffness is variable and which is embodied in such a manner and connected in such a manner with said oscillatable unit, or is a component of said oscillatable unit in such a manner, that at least the resonance frequency of said oscillatable unit is changeable via said at least one tuning unit.

15. (New) The apparatus as claimed in claim 14, wherein:

said tuning unit comprises a piezoelectric material, which is connected with electrodes and whose stiffness is changeable at least by an electric current between the electrodes.

16. (New) The apparatus as claimed in claim 14, wherein:

said tuning unit comprises a magnetostrictive material whose stiffness is changeable at least by an applied magnetic field.

17. (New) The apparatus as claimed in claim 14, further having:

a control unit which controls said tuning unit electrically.

18. (New) The apparatus as claimed in claim 17, wherein:

said control unit is embodied in such a manner that it tunes the resonance frequency of said oscillatable unit as a function of the oscillation amplitude and/or oscillation frequency of the mechanical oscillations produced and/or received by said oscillatable unit.

19. (New) The apparatus as claimed in claims 14, wherein:

at least one inner oscillatory rod and an outer oscillatory rod are provided in said oscillatable unit;

said outer oscillatory rod surrounds said inner oscillatory rod coaxially;

said outer oscillatory rod and said inner oscillatory rod are coupled together; and

at least one tuning unit is coupled at least with one of said oscillatory rods.

20. (New) The apparatus as claimed in claim 19, wherein:

said tuning unit is connected at least with said inner oscillatory rod.

21. (New) The apparatus as claimed in claim 14, wherein:

at least one sending/receiving piezo is provided in said oscillatable unit;

said tuning unit is a part of said oscillatable unit; and

the resonance frequency of said oscillatable unit lies in the ultrasonic range.

22. (New) The apparatus as claimed in claim 14, wherein:

at least one front-side mass and one rear-side mass are provided in said oscillatable unit;

at least one sending/receiving piezo is provided between the two masses;

at least one tuning unit is part of one of the two masses; and

the resonance frequency of said oscillatable unit lies in the ultrasonic range.

23. (New) The apparatus as claimed in claim 21, wherein:
at least one matching layer is provided in said oscillatable unit for coupling to the medium.

24. (New) The apparatus as claimed in claim 22, wherein:
at least one bolt is provided in said oscillatable unit for producing a prestress.

25. (New) The apparatus as claimed in claim 14, wherein:
said oscillatable unit includes at least one measuring tube of a measurement pickup of vibration-type inserted into the course of a pipeline, especially a Coriolis mass flow or a Coriolis mass flow/density meter.

26. (New) A method for changing the resonance frequency of an apparatus for determining and/or monitoring at least one physical or chemical, process variable of a medium, comprising the steps of:

providing at least one oscillatable unit, which produces and/or receives mechanical oscillations;

connecting a tuning unit, with the oscillatable unit or is a part of the oscillatable unit; and

changing the stiffness of the at least one tuning unit.